REMARKS

Claims 1-8 and 10-18 are pending in this application. Applicant thanks the Examiner for recognizing that claims 8 and 10 include allowable subject matter. In this Response, Applicant has provided remarks that explain some of the differences between the present invention and the references cited by the Examiner. In light of these differences, Applicant submits that the Examiner's rejections have been overcome.

THE REJECTIONS UNDER 35 U.S.C. § 102

At pages 3-4 of the Office Action, the Examiner rejected claims 1, 3, 5-7, 11, and 13-18 under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2003/0123598 to Gollamudi *et al.* ("Gollamudi"). For at least the reasons set forth below, Applicants submit that the Examiner's rejections have been overcome.

Gollamudi relates to a multi-channel adaptive quality control loop unit that determines MCS (Modulation and Coding Scheme) at the transmission side based upon the channel condition between a transmitter and a receiver. The transmitter has a look-up table in which each MCS level n is associated with a channel condition threshold $\theta(n)$ and the receiver estimates the channel condition between the transmitter and receiver.

When the transmitter receives the estimate of channel condition from the receiver, it acquires the highest channel condition threshold $\theta(m)$ which the estimate of channel condition satisfies, then selects MCS(m) associated with this highest channel condition threshold $\theta(m)$ from the look-up table in order to maximize data throughput and transmits data in accordance with MCS(m).

If the receiver succeeds in receiving the packet correctly, the transmitter decreases the channel condition threshold corresponding to the MCA(m) in the look-up table by Δ_{DOWN} and similarly decreases the channel condition thresholds corresponding to other MCS levels. If the receiver fails to receive the packet correctly, the transmitter increases the channel condition threshold corresponding to the MCA(m) in the look-up table by Δ_{UP} and similarly increases the channel condition thresholds corresponding to other MCS levels.

As a result, if the current estimate of channel condition is the same as the preceding estimate of channel condition and the receiver succeeded to receive the packet correctly at preceding time,

the MCS level corresponding to the current highest channel condition threshold θ(m) is large and the data transmission speed becomes high, thereby improving the throughput.

On the other hand, if the current estimate of channel condition is the same as the preceding estimate of channel condition and the receiver failed to receive the packet correctly at the preceding time, the MCS level corresponding to the current highest channel condition threshold θ(m) is small and the data transmission speed becomes low, thereby the probability that the receiver succeeds to receive a packet improves.

From the foregoing discussion, Gollamudi determines MCS at the transmitter based upon the channel condition. However, with regard to how to determine the MCS, Gollamudi differs from the claimed invention greatly. That is, Gollamudi does not disclose the following features of claims 1 and 3: (i) estimating means for estimating a variation-with-time characteristic of the radio link quality using the radio link quality information reported by the packet receiving side or using a pilot symbol received from the packet receiving side; (ii) changeover means for adaptively changing over a target error rate using the variation-with-time characteristic; and (iii) deciding means for deciding a modulation scheme and/or encoding rate, in such a manner that packet error rate becomes equal to the target error rate.

In addition, Gollamudi fails to teach the following features recited by claim 11: (i) estimating means for estimating a variation-with-time characteristic of the radio link quality using a pilot symbol received from the packet transmitting side; (ii) changeover means for adaptively changing over a target error rate using the variation-with-time characteristic; (iii) means for correcting the radio link quality value in such a manner that packet error rate becomes equal to the target error rate; and (iv) means for reporting the corrected radio link quality value to a packet transmitting side.

Finally, Gollamudi also fails to teach the following features of claim 15: (i) means for measuring throughput of a received radio packet; (ii) control means for adaptively controlling a target error rate so as to maximize the throughput; (iii) means for correcting the radio link quality value in such a manner that packet error rate becomes equal to the target error rate; and (iv) means for reporting the corrected radio link quality value to a packet transmitting side.

In sum, because Gollamudi fails to teach each and every feature of the present invention recited by the independent claims, Applicant submits that the Examiner's § 102 rejections have

been overcome. As such, reconsideration and allowance of the pending claims is respectfully requested.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments and remarks still do not resolve all of the issues regarding patentability of the pending claims, Applicant invites the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Petition for Extension of Time is submitted herewith extending the time for response two months to and including August 17, 2008. No other fees are believed to be due at this time. Should any other fees be due, please charge them to Deposit Account No. 50-4545, Order No. 5254-005-US01.

Respectfully submitted,
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By: 

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